

The Juvenile Instructor



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NO. 7.

THE DISTAFF.

AMONG the many excellencies enumerated by an old philosopher, as characteristic of a virtuous woman, that of industry is prominently set forth: "She layeth her hands to the spindle, and her hands hold the distaff." Formerly, the word "spinster" was used to designate young ladies who were eligible for marriage; it is so now in England, in publishing or recording marriages. By a fiction, all single ladies are then called spinsters, although few are such, so far as using the distaff, or spinning, is concerned. This is not true, however, of all ladies; on the continent of Europe the distaff is still used.

A gentleman who has traveled considerably, speaks with rapture of the ladies using the distaff, separating skillfully, the filaments of the material used for spinning with one hand, and gracefully supporting the distaff, while the other is engaged in giving the necessary twist to the thread. A bobbin is used and spun round rapidly, at the same time that the delicate fingers draw out the thread of uniform thickness. Whether the fair fingers, the fibre used, or the fascinating voices of the ladies, gave rise to the rapture spoken of, it would be hardly fair to hazard an opinion; but it is interesting to learn that in Italy and Switzerland the practice still continues of using the distaff.

That the ladies depicted in the plate are engaged in this occupation there can be no doubt; perhaps forming some

of the fine threads so artistically worked into lace, such as that continent is so famous for producing. That the ladies are engaged in conversation is probable, while it is evident they are industriously spinning, some of the thread, already made, having been reeled.

It appears that many engage in this occupation while herding goats and cows; the simple instruments represented would admit of this, although the sitting position of the fair spinsters, and the drapery of the chamber, gives an idea of employment at home. There is an air of gracefulness in the dress of the ladies, and an appearance of comfort and simplicity about the habitation, suggestive of

primitive usages; to which the peep into the open country, afforded by the artist, recalls associations of rural scenery and happiness.

But the days of the distaff are passing away from us; our modes of manufacture are the result of necessity. Steel spindles and unerring machinery, are even super-

seding the spinning-wheel of the last age. Now, it would be slow indeed for us to adopt such instruments as the distaff for spinning. But we should be thankful that, although our means of manufacture so far transcend those of our ancestors, the vice usually attendant on the use of machinery in large cities is unknown here. Our "spinsters" can meet and work together without using improper language, or descending to improper practices; we have



the innocence and simplicity of the age of the distaff, while we have the advantages of the spinning-jenny and its attending comforts.

[For the *Juvenile Instructor*.]

Chemistry of Common Things.

FERRUM—IRON.

THIS metal is of the highest importance to man; gold, much as it is coveted, dwindles into insignificance when compared with it, so far as utility is concerned. From the earliest history it has been noticed among metals; Tubal Cain is spoken of as an instructor of artificers in brass and iron. Eighteen hundred years before Christ it is mentioned in Egyptian annals; the Greeks also spoke the praises of the discoveries of this precious metal, at a period 1,500 years before Christ. In Great Britain it was known many years before the Christian era; a century after Christ a town now famous as a watering place (Bath), in England, was noted for its iron foundries. But we must not forget the Romans, who were indebted to their famous iron short swords, and other instruments of war, together with their iron-like courage, for their victories over enemies, perhaps equally courageous, but less potent because more poorly armed. In fact, every country that has risen into importance among other nations has made this metal an article of manufacture and commerce.

Sometimes circumstances have caused governments to prohibit the exportation of iron, so great has its power been deemed; sometimes, but more rarely, its importation has been prevented; but this has always been with a view to compel the people to make their own. No wonder then that our leaders have been so anxious about the home production of a metal so really *necessary* to our development as a people. Who then shall we laud as our great discoverers? Well, foremost among them, or one of the foremost, let us speak the praises of the late Nathaniel V. Jones, who labored incessantly to benefit his brethren by producing a marketable iron. Doubtless others also have labored in the same good cause; those who have done so, or who shall still labor for this object, as disinterestedly as he did, will not fail to receive the gratitude due to the benefactors of a people, when the real importance of iron is understood.

There are still samples of iron produced by, or under the direction of, Mr. Jones, to be seen in our excellent museum; also specimens of magnetic iron, and other ores of iron found in this territory. Also specimens of coal, lime-stone and fire-brick, indispensable as fuel, for fluxing, and for lining the furnaces used in making iron. Generally, whenever iron-ore abounds, the necessary materials for its reduction into the metallic form, exist. Wood may, however, be used as it was, even in Great Britain, formerly;—now, immense beds of coal have made England rich, by enabling her to develop her mineral resources. We shall yet produce iron in abundance, if attention is paid to it, for it will be wanted.

As with other metals, iron has to be deprived of its oxygen; for pure metallic iron is seldom found. It generally exists in combination with *non-metals*, as oxides and sulphides. Sometimes, carbon is in union, it is then usually found mixed with argillaceous earth. These non-metals and earthy substances have to be separated from

the iron; for which purpose some other substance has to be used to cause the iron to melt and flow away from the impurities. To effect this, the iron-ore, or *mixed* iron-ores with broken pieces of limestone, are put in a blast furnace and submitted to intense heat. The fuel is placed in with the ore and *flux*, and the bottom is then closed to prevent any metal flowing until a sufficient quantity is melted, when it is drawn off. Huge bellows are used, moved by water power or by steam, large quantities of air enter by suitable tubes, and great chemical changes take place, which are worth attention. First of all the oxide of iron, which may have been "roasted" before, to expel any sulphur, and bring the ore into the state of oxide, is brought to an intense heat by the blast of hot or cold air. In this way the carbon (fuel) unites to the oxygen of the air, forming carbonic acid. This gas, with the nitrogen of the air, now set free from its oxygen, rises in the furnace, and coming in contact with white-hot carbon, is reduced to carbonic oxide. The iron ore then loses its oxygen, and flows down lower in the furnace as a spongy mass of metal, where it enters into combination with a certain quantity of carbon, by which it becomes more fusible; the flux and earthy impurities forming a liquid mass somewhat resembling melted glass. This is afterwards separated when the iron is run off, forming a substance called "slag," a kind of hard cinder. The liquid iron which is then in a state of a carbonated iron (iron and carbon) settles down to the bottom of the furnace, from whence it is drawn off and run into moulds of sand, where it cools. This is "cast iron," sometimes called "pig iron," which closes our first part of the process of making iron.

BETH.

THE FORCE OF IMAGINATION.

BUCKLAND, the distinguished geologist, one day gave a dinner, after dissecting a Mississippi alligator, having asked many of the most distinguished of his class to dine with him. His house and all his establishment were in good style and taste. His guests congregated. The dinner table looked splendid with glass, china and plate, and the meal commenced with excellent soup. "How do you like the soup?" asked the doctor, after having finished his own plate, addressing a famous gourmand of the day. "Very good indeed," answered the other; "turtle, is it not? I only ask, because I do not find any green fat." The doctor shook his head. "I think it has somewhat of a musky taste," says another; "not unpleasant, but peculiar." "Alligators have," replied Buckland; "the cayman peculiarly so. The fellow I dissected this morning, and which you have just been eating—" There was a general rout of guests; every one turned pale. Half a dozen started up from the table; two or three ran out of the room, and only those who had stout stomachs remained to the close of an excellent entertainment. "See what imagination is," said Buckland. "If I had told them it was turtle, or terrapin, or bird's nest soup, salt-water amphibia, or fresh, or the gluten of a fish from the maw of a sea-bird, they would have pronounced it excellent, and their digestion would have been none the worse. Such is prejudice." "But was it really an alligator?" asked a lady. "As good a calf's head as ever wore a coronet," answered Buckland.—*Selected*.

That which is too little for luxury is abundant enough for nature.

Would you be strong, conquer yourself.

THE LIGHTHOUSE.

*From "TRIUMPHS OF INVENTION AND DISCOVERY."
Published by T. Nelson & Sons, London.*

WITH the last gleams of daylight, before the night fell and shrouded it from view, the tower was seen rising proudly from the midst of the waters. Before the dawn it had disappeared for ever, and the waves were lashing fiercely around the bare bleak ledge of the fatal rock. Poor Winstanley had had his presumptuous wish only too fully realized. The storm of the 26th November was one of the most fearful that ever ravaged the English shores. The whole coast suffered from its fury, and when the morning came, not a sign remained of the lighthouse, architect, or workmen, save a fragment of chain-cable wedged firmly into a crevice of the rock. The disappearance of the warning light was quickly followed by the wreck of a large homeward-bound man-of-war, and the loss of nearly all her crew, upon the rocks.

The first Eddystone lighthouse was a strange, fantastic looking structure, deficient in every element of stability; and the wonder was not that it fell in pieces as it did, but that it was able to withstand so long the boisterous weather of the Channel. But if of little merit as an architect, Winstanley at least deserves respect, as Smeaton remarks, for the heroism he displayed in undertaking "a piece of work that before had been looked on as impossible."

For four years the Eddystone remained bare and untenanted, till, in the summer of 1706, the erection of a new lighthouse was commenced under the superintendence of John Rudyerd, by profession a silkweaver in Ludgate Hill, London, but by natural genius an engineer of considerable merit. With such skill and energy did he apply himself to the work, that before two summers were over his tower was completed, and its friendly light beamed over the troubled waters and the sunken crags. Rudyerd's lighthouse was entirely of wood, weighted at the base by a few courses of mason work, and 92 feet in height. In form, it was a smooth, solid cone of elegant simplicity, unbroken by any of those ornamental outworks, which offered the wind and sea so many points to lay hold of, in Winstanley's whimsical pagoda. Smeaton speaks of Rudyerd's tower as a masterly performance; and had it not been destroyed by fire, forty-six years after its erection, there seems little reason to suppose it might not have been standing to this day,—although no doubt the ravages of the worm in the wood would have demanded frequent repairs. On the 2nd December, 1755, some fishermen who happened to be on the beach very early in the morning preparing their nets, were startled by the sight of volumes of smoke issuing from the lighthouse. They instantly gave the alarm, and a boat was quickly manned for the relief of the sufferers. It did not reach the rock till about ten o'clock, and the fire had then been raging for eight hours. It was first discovered by the light-keeper upon watch, who, going into the lantern about two o'clock in the morning to snuff the candles, found the place filled with smoke. He opened the door of the lantern into the balcony, and a mass of flame immediately burst forth from the inside of the cupola. He lost no time in seizing the buckets of water kept at hand, and dashing them over the fire, but without effect. His two companions were asleep, and it was some time before they heard his shouts for assistance. When at length they did bestir themselves, all the water in the house was exhausted. The light-keeper—an old man in his ninety-fourth year—urged them to replenish the buckets from the sea; but the difficulty of lowering the buckets to such a depth,

and their confusion and terror at the sudden catastrophe and their impending fate, destroyed their presence of mind, and rendered them quite powerless. The old man did his best to prevent the advance of the flames; but, exhausted by the unavailing labor, and severely injured by the melting lead from the roof, he had to desist. As the fire spread from point to point, with rapid strides descending from the summit to the base, the poor wretches fled before it, retreating from room to room, till at last they were driven to seek shelter from the blazing timbers and red hot bars, in a cleft of rock. There they were found by their preservers, crouching together half dead with suffering and fright. It was with the greatest difficulty that they were got into the boat; and they had no sooner reached the shore than one of them, crazed by the terrors he had undergone, ran away, and was never heard of more. The old man lingered on for a few days in great agony, and died from the injuries he had received.

Such was the fate of the second lighthouse on the Eddystone,—one element revenging, as it were, the conquest over another.

In spite of the fatality which seemed to attend these lighthouses, the lessees of the Eddystone—for it was then in private hands, and did not come into the hands of the Trinity House till many years after—resolved to make another attempt; and this time they selected as the architect one of the ablest professional men of the day, and with sagacious liberality, adopted his advice to build it of stone and granite.

Smeaton truly belonged to the class of heaven-born engineers. From his earliest years the bent of his genius unmistakably revealed itself. Before he was six years old, he one day terrified his parents by climbing to the top of a barn to fix up some contrivance he had put together, after the fashion of a windmill; and another time he constructed a pump that raised water, after watching some workmen sinking one. And as he grew older, his efforts took a more ambitious range, and were all equally remarkable for their originality and success. His father destined him for the bar; but his inclination for engineering was so irresistible, that he allowed him to resign all chance of the woofsack, and set up in business as a mathematical instrument maker. He gradually advanced to the profession of civil engineering, which he was the first man in England to pursue, and which he may be said to have created.

It was in 1756 he commenced the construction of the great work which may be regarded as the monument of his fame. Having decided that his lighthouse should be of stone, the next point to be settled was its form. His thoughts, he tells in his book, instinctively reverted to the analogy between a lighthouse shaft and the trunk of a stately oak. He remarked the spreading roots taking a broad, firm grip of the soil, the rise of the swelling base, gradually lessening in girth in a graceful curve, till a preparation being required for the support of the spreading boughs, a renewed swelling of diameter takes place; and he held that cutting off the branches, we have, in the trunk of an oak, a type of such a lighthouse column as is best adapted to resist the influence of the wind and waves. Whether or not Smeaton arrived at the form of his lighthouse, which has since become the model for all others, from this fanciful analogy, its appearance rising from the rock presents a strong resemblance to a noble tree stripped of its boughs and foliage.

(To be continued.)

Reckless youth makes rueful age.

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GEORGE Q. CANNON

EDITOR.

SATURDAY, APRIL 2, 1870.

MISSIONARY SKETCHES.

NA-LIMA-NUI did not know where we could find a man who could entertain us; but she said we were welcome to come and live in her house. We had a long talk with her, and I endeavored to explain our position and what our business in coming to the Islands was. We had no money, I said, but anything that we did have we should be glad to give her. We felt humble, and would have been pleased to obtain a corner on the floor to sleep in, so that we could live, learn the language and fill our mission. The kindness of this old lady touched me, and I could not refrain from weeping. Never in my life did I feel so thankful as I did for the shelter she offered, and I praised the Lord therefor; it was He who had touched the hearts of herself and family. The thought that we would not have to separate added to our joy, and you can probably imagine with what delight we went to find Brother Bigler. He had succeeded in finding a native who was willing to give him food and a lodging-place, if he would milk his cow and do other chores. He was as much rejoiced as we upon learning that we could live together.

We did not expect to get any more accommodations than a place to stretch ourselves at night in our blankets; but Na-lima-nui's daughter, who was married to a Spaniard, lived adjoining, and she had arranged for her mother to live in her rooms, and the old lady's room had been prepared for us. They had fixed up the room as well as they could. Such a profound feeling of thankfulness as I had on our obtaining a shelter in this poor, native woman's hut I never had before. It has been my fortune, since those early days of my life, to travel considerably, and to mingle with our missionaries in many lands. I have seen elders who were willing to endure everything for the gospel's sake; their hearts were filled with joy and a burning desire to magnify their priesthood and to fill their missions. What they ate or drank, where they lodged or how they were clothed, were matters of little or no thought to them, so long as they had the Spirit of the Lord and were in the line of duty. Others, I have seen, who felt every little privation to be a dreadful hardship; who thought, if everything did not go smoothly with them, they had to suffer more than was necessary, and who were ready to desert their fields of labor and run home at the first opportunity. I scarcely need say that men of this latter class are rarely, if ever, successful missionaries. They think too much of their own ease and comfort, and their thoughts are too much upon themselves, to labor under circumstances of any difficulty for the salvation of others. When an elder has the spirit of his mission, self-comfort is forgotten. He is perfectly happy in declaring the gospel and laboring for the salvation of others, and he gives but little thought to the kind of food he eats, or how he fares in other respects. His bodily wants are swallowed up in his joy in Christ.

These were our feelings at the time of which I write. We were willing to live on any food that would sustain our bodies, however common, or even disagreeable it might be; we were glad to get a shelter, however humble, to lie under; our desire was to fill our mission; and because we felt thus, the Lord made

up for any lack of comfort by giving us His holy spirit. I had never been so happy in my life before as I was then. When I prayed I could go unto God in faith; He listened to my prayers; He gave me great comfort and joy; He revealed himself to me as He never had before, and told me that if I would persevere, I should be blessed, be the means of bringing many to the knowledge of the truth and be spared to return home after having done a good work. Many things were revealed to me, during those days, when He was the only friend we had to lean upon, which were afterwards fulfilled. A friendship was there established between our Father and myself, which, I trust, will never be broken or diminish, and which I hope has continued to grow stronger from those days to these.

It is not my custom to write thus freely about myself; but I am writing for children to read, upon whom I would like my experience to make an impression. I desire that they should make God their friend, and seek unto Him with faith for that joy, peace and perfect love which He alone can give.

(To be continued.)

WONDERFUL MEMORIES.—Some examples of the marvels of memory would seem entirely incredible had they not been given to us upon the highest authority. Cyrus knew the name of each soldier in his army. It is also related of Themistocles that he could call by name every citizen of Athens, although the number amounted to twenty thousand. Mithridates, King of Pontus, knew all his eighty thousand soldiers by their right names. Scipio knew all the inhabitants of Rome. Seneca complained of old age because he could not, as formerly, repeat two thousand names in the order in which they were read to him; and he stated that on one occasion, when at his studies, two hundred verses having been recited by the different pupils of his preceptor, he repeated them in a reversed order, proceeding from the last to the first.

Lord Granville could repeat, from beginning to end, the New Testament in the original Greek. Cooke, the tragedian, is said to have committed to memory all the contents of a daily newspaper. Racine could recite all the tragedies of Euripides.

It is said that George III never forgot a face he had seen nor a name he had heard. Mirandola would commit to memory the contents of a book by reading it three times, and could frequently repeat the words backward as well as forward. Thomas Cranmer committed to memory, in three months, an entire translation of the Bible. Euler, the mathematician, could repeat the *Aeneid*, and Leibnitz, when an old man, could recite the whole of Virgil, word for word.

It is said that Bossuet could repeat, not only the whole Bible, but all Homer, Virgil and Horace, besides many other works.

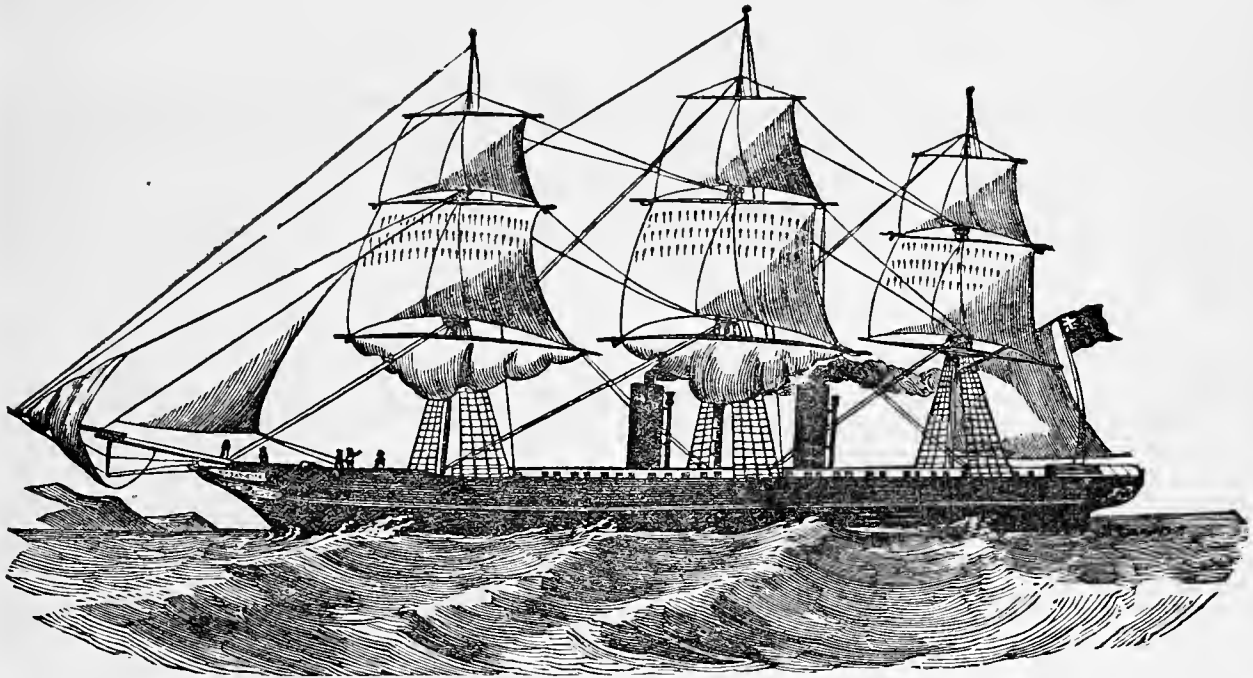
Mozart had a wonderful memory of musical sounds. When only fourteen years of age, he went to Rome to assist in the solemnities of Holy Week. Immediately after his arrival, he went to the Sistine Chapel to hear the famous *Miserere* of Allegri. Being aware that it was forbidden to take or give a copy of this renowned piece of music, Mozart placed himself in a corner and gave the strictest attention to the music, and on leaving the church noted down the entire piece. A few days afterward he heard it a second time, and, following the music with his own copy in his hand, satisfied himself of the fidelity of his memory. The next day he sang the *Miserere* at a concert, accompanying himself on the harpsichord, and the performance produced such a sensation in Rome that Pope Clement XIV requested that this musical prodigy should be presented to him at once.—*Selected.*

THE WONDERS OF THE DEEP.

DOUBTLESS many of our young readers have crossed the broad Atlantic Ocean, and a few perhaps have sailed on the waters of the still broader Pacific; they have seen these vast waters when gently ebbing and flowing in a calm, or when lashed into fury by mighty winds; they have then felt the vessel on which they stood, roll and toss, shiver and strain, as the vast waves rolled by, one after another, and struck the vessel as they passed. But we presume very few of our young friends have suffered the horrors of a shipwreck; still they can understand how dreadful a thing it is to be wrecked in the midst of the vast ocean far away from succor, friends and home. We can imagine how the furious gale rages, how the waves roll to a tremendous height, at one moment plunging the ship into an awful gulf, at another lifting it on the crest of a

to four fifths of this earth's surface. To cross these vast seas men have constructed vessels of all sizes from the small canoe to the fine steamship that appears in our picture. As there are on land, huts, cottages, villas, mansions, palaces and castles, so there are on the waters, canoes, yachts, schooners, brigs, frigates, men-of war, and many other kinds, some used for pleasure, some for trade, some for discovery, some for war. With these vessels men have penetrated almost every portion of the world; they have sailed amidst the thousand islands in the Indian ocean, have crossed the Atlantic and Pacific laden with the riches and productions of many climes, and have crowded amongst the icebergs of the far north and south, trying to discover new lands and other nations.

Steam has not been used so very many years to help navigate the seas, rivers and other waters. There are many persons living who can recollect when the first steamers were built in this country and in England.



foaming mountain of water. We can in fancy see the sky overshadowed with dark clouds, and feel the pelting rain streaming down upon us. The lightning is continually flashing all around, and the thunder rolls and roars as though the heavens were falling. On board, the sailors, under their captain, are doing their best to save the vessel, while the passengers, unused to such a scene of terror, huddle together in their berths, or give vent to their feelings in prayers or tears. But the storm does not abate; a mast is swept overboard, a leak is sprung and water pours in faster than it can be pumped out. Soon another mast is torn away, and the waves break clean over the doomed ship. At last the efforts of the sailors slacken, the pumps are left, the boats are lowered, all who can crowd into them, and, in a few minutes, the brave vessel sinks in its watery grave. Soon the gale subsides and the crew and passengers find themselves out on the vast ocean, perhaps a thousand miles from land. A dreadful fate is theirs, to gradually die tormented by thirst and hunger, to be scorched by the hot sun by day and chilled by the cold winds at night; their only hope of safety, some passing vessel to rescue them from the horrors that increase continually around them.

It is said that the great waters cover from three quarters

Fifty or sixty years ago there were but very few steamships, to-day they may be found everywhere, even on our own Great Salt Lake. Here we must tell you an anecdote. The first steamship that visited the West Indies was seen by the crew of a little Spanish vessel near Trinidad. They saw that she came right along against the wind, vomiting fire and smoke. Noticing a man on deck, they fancied that it was the work of some demon or evil spirit. So frightened were they that they ran their vessel ashore and fled into the woods.

Amongst the wonders of the great waters is the Maelstrom. This is a terrible whirlpool situated off the rocky coast of Norway, not far south of the Loffaden isles. It is said that the force of this whirlpool lessens and increases with the changes of the tide, while the cause of the Maelstrom itself seems to be the meeting of two tides, flowing in different directions, and in part hemmed in by the islands and mainland of Norway. The waters are whirled around with frightful rapidity, heaped up on the outside and sinking to a deep hollow in the centre, and appear to the adventurous mariner who approaches near enough as though they were being sucked down through some awful chasm. To get too near this whirlpool is certain death. Large vessels have sometimes been carried down with all

on board. Whales are also sometimes "sucked in" in the same way. Of all the dangers of the northern seas none are feared by mariners so much as this terrible whirlpool.

Referring to whales, we may here tell you, that hundreds of vessels are engaged in the one trade of catching whales, they are called whale-ships or whalers. Some visit the coast of Greenland, many the North Pacific Ocean; whilst still others sail far away in the Southern Ocean. The whale fishery is one of the most exciting and dangerous pursuits in which a man can be engaged. We will suppose we are on a whale ship looking out for the animals. No sooner is one discovered, than all is bustle on board, the boats are quickly lowered, the right men leap therein, and pull away with all their might to the place where the monster is seen, trying to reach him before he dives. When near enough, one of the men darts a spear or harpoon into the whale's back. Then down it plunges with the harpoon in its flesh. But the harpoon has a long line or rope attached to it, which the men let out. They must be quick at their work, or the whale will sink the boat and pull it through the water after him. Sometimes the rope will catch in the boat and saw it in two, and sometimes one of the men will be caught by the rope and pulled overboard or almost cut in pieces, before his comrades can help him. The whale does not remain long under the water, but soon comes up again to breathe; then more harpoons are thrust at him, until he is killed. Sometimes the whales upset the boats and drown the crews, and they have been known to destroy large vessels.

The whale fishers are also subject to other dangers, the seas where these creatures abound are often crowded with icebergs. Some vessels have met with these huge ice mountains more than four thousand yards long and three thousand broad, and calculated to weigh more than a thousand million tons. These icebergs have various shapes, and many are very beautiful. Some resemble palaces, others castles, churches, arches, trees, groves, towers, &c. In the night these masses of ice can be perceived by a natural brightness they possess, and in foggy weather by a strange blackness in the air. Many vessels have been crushed to pieces between them, when owing to a calm or some other cause they could not get out of their way. To see mountains of ice floating towards a vessel and not to be able to avoid them must be a horrible sight for those on board. There is then but one way of escape, it is to take to the boats, and in such cases the perils of those arctic seas are such that few men live to recount them.

Notwithstanding the dangers of the far northern seas, many adventurous men, have, from time to time, tried to force their ships through the snow and ice with the intention of finding the North Pole or discovering a passage for ships along the northern shores of this continent. The north Pole is not yet reached, but one or two vessels have accomplished the "north west passage;" as the voyage along the arctic seas north of the North American Continent is termed. But though Captains Beechy, Ross, Parry, Franklin, Kane, McClintock and others have not accomplished all they desired, they have made many valuable discoveries in the arctic regions.

The whale is not the only denizen of the deep that proves fatal to the mariner or his floating habitation. The shark, sometimes called the tiger of the sea, is a fierce, voracious fish, often of great size and strength, that sometimes catches and devours those swimming in the sea in warm countries. Sometimes terrific combats occur between bold sailors and these terrible fish. We will tell

you of one as we have read the account. "One day the little son of a passenger in a ship on the Atlantic, fell overboard, and was in danger of being drowned, when a seaman leaped into the water to his rescue. He reached the child and was swimming back to the vessel, when a shark was seen approaching. The sailor's own son, a youth about eighteen years old, caught hold of a sword, and plunging into the sea, swam to his father's rescue. Diving quickly, he drove the sword into the belly of the shark, which instantly turned to attack him. Meanwhile ropes were thrown from the deck, and father and son were drawn towards the vessel. They had nearly reached it, when the shark caught the sailor boy by the waist and bit him in twain. The monster however soon died from his wound."

Then again there is that strange creature the cuttle fish, which, in the Indian and African seas, grows to a large size and is very dangerous. It has a body enclosed in a bag, with eight long legs or arms. In the inner sides of these long slender arms are suckers by which it clings tightly to anything it lays hold of. One navigator asserts, that while three of the sailors were scraping the sides of his vessel, a cuttle fish seized two of them, and after a short struggle, dragged them down. One of the creature's arms was cut off in the contest. Another crew was attacked by one of these monsters off the coast of Angola, in Africa. It threw its arms across the vessel, and was on the point of dragging it down, when the crew succeeded in cutting the arms off with swords and hatchets. It is asserted that in the Indian seas many small vessels are provided with axes for this purpose.

We could tell you of many more wonders of the deep, of tornadoes, simoons, waterspouts, volcanoes under the sea, the coral islands and many other strange things, but must leave them for some future numbers of the JUVENILE INSTRUCTOR.

G. R.

JAPANESE PAPER.—The Japanese are emphatically a race of paper-makers and paper users. It enters into all their trade calculations, and is exhaustive of more of their ingenious art than any other article. When a collection of the different kinds of paper was made to be sent to the exhibition of 1862, no less than sixty-seven varieties were forwarded. It is made to subserve the purposes of the useful as well as the ornamental. Everywhere may be seen paper fans, paper pouches, paper lanterns, paper-pocket-handkerchiefs, umbrellas, cloaks, and windows. The paper strings used by shopkeepers, so lately introduced here, have been used by the Chinese for centuries. A short time ago an American inventor applied for a patent on a paper hat, and a revolution in tiles was promised. But the invention was little more than a theft from Japan, for the Japanese wore hats of paper long before Columbus saw the West Indies.—*Selected.*

SPREAD OF THE ENGLISH TONGUE.—There is no other spoken language so cheap and expressive by telegraph as the English. So the electric wires are becoming teachers of our mother tongue in foreign countries. The same amount of information can be transmitted in fewer English words than French, German, Italian, or any other European language. In Germany and Holland, especially, it is coming to be a common thing to send telegrams in English to save expense and insure precision.—*Selected.*

Many of the waves of trouble, like those of the ocean, will, if we await them calmly, break at our feet and disappear.

[For the *Juvenile Instructor*.]

Biography.

JOSEPH SMITH, THE PROPHET.



HO can read the words of Joseph to the officers of the troops and the other persons who visited him, as described in the last number, and not be impressed by their truthfulness? To his mind the vision of what they would pass through was clear and reliable. Had he lived now he could not have used words describing more clearly the actual scenes those men have witnessed than did those he uttered in their presence on that summer afternoon, twenty-six years ago. But who believed him, or cared for what he said? They ridiculed the idea of God revealing himself to man, of His choosing a prophet, or of any man knowing more about the future than they themselves knew by their natural wisdom. Because he was chosen as a servant of God, they hated him and were desirous that he should be killed. Is it not strange that such a man as Joseph was, so guileless, innocent and god-like, could not be suffered to live? The fact that his life was sought for, and that many were willing either to kill him or have him killed, exhibits more forcibly than words can the dreadful condition of that people, and how ready they were to be the slaves of the devil and to do his bidding. They were in the same condition as the Jews. Jesus, the only begotten of the Father, the Redeemer of the world, was in their midst, and would have saved them; but they would not be saved by Him, they preferred to kill Him.

Even the apostates—the Laws, the Fosters and the Higbees—who were Joseph's most bitter and vindictive enemies, knew there was nothing against him nor his brethren, and, therefore, that the law could not reach them; but they said *powder and ball would*. It was blood they wanted; the blood of the righteous, the blood of the innocent; and they were determined to have it, though by shedding it they would commit the unpardonable sin, become sons of perdition and sink themselves to the lowest hell.

You recollect, doubtless, that the principal reason which was assigned by Governor Ford for insisting upon Joseph and the other brethren going to Carthage was that they might be tried before the justice of the peace who issued the writ on which they were arrested. When they went before Squire Wells, at Nauvoo, this was the objection urged by the prosecution. But now that they had the brethren in their power at Carthage this objection no longer had weight, either with Ford or the apostates who swore out the writ. Thomas Morrison was the name of the justice who issued the writ; but there was a greater enemy than he in Carthage, who held the commission of justice of the peace; and, besides holding this office, he was the Captain of the Carthage Greys, a company of mutineers and notorious mobocrats. His name was *Robert F. Smith*. Who so suitable as he for this business! Joseph, Hyrum and thirteen others were taken before him. The prosecution would have been pleased to have kept

the brethren in custody on this charge; but this was too glaring a violation of the law. But the magistrate tried to accomplish the same end by asking so heavy an amount of bail that the wealth of Joseph and the brethren and their friends, he thought, would be overreached. In this, however, he was disappointed, for John S. Fullmer, Edward Hunter, Dan Jones, John Benbow and others stepped forward and gave the necessary security—some of them going security to the full extent of their property—for their appearance at the next term of the Circuit Court for Hancock county. No sooner was this done than he adjourned his court, and left the Court House without calling on Joseph and Hyrum to answer to the charge of treason. He kept out of the way also until a late hour, with the intention, without doubt, to prevent the appearing of Joseph and Hyrum's witnesses, and to furnish an excuse for sending them to jail.

In the evening constable Bettisworth appeared at the lodgings of Joseph and Hyrum, and insisted that they should go to jail. Joseph demanded a copy of the mittimus. This Bettisworth refused. Messrs. Woods and Reid, as Joseph and Hyrum's lawyers, urged that they ought to be brought before a justice of the peace for examination before they could be legally sent to jail. He then, to their surprise, exhibited a mittimus, signed by the infamous R. F. Smith, in which it was stated that they having been arrested upon the oath of Augustine Spencer and Henry O. Norton, for the crime of treason, and having been brought before him for trial, *which trial had been postponed*, because of the absence of material witnesses, therefore he commanded the constable to take them into his custody in the county jail, there to remain until discharged by due course of law.

The trap had been prepared; but the victims would not walk into it; neither could they be led into it legally. What was to be done? Was all the plotting and scheming of the cowardly, murderous crew to fail? Was it to be in vain that Thomas Ford, Governor of the sovereign State of Illinois, had acted as a decoy, had pledged his own faith and that of the State that Joseph and Hyrum should be protected, in order to bring them to Carthage? No; the plot must succeed, the victims must be ensnared, and if they could not be made to enter the trap by law, they must be forced in by gross perjury, falsehood and against all law. Therefore Robert F. Smith issued this mittimus—which will stand against him through eternity—based upon the lie that the "*trial had been postponed*."

(To be continued.)

HOW CHEWING GUM IS MADE.—A great many American girls and boys, as well as children of larger growth, have acquired the truly disgusting habit of chewing gum. It may be pleasant for them to know how it is made. The greatest gum manufacturing establishment is at Podunk, Mass., and the fame of the gum (and the gum itself) is in the mouths of many. One of the employees of that establishment, who has become thoroughly initiated into the mysteries of the manufacture of the gum, was recently discharged from the establishment, and has divulged the mode of making the gum which these young Americans masticate with such velocity and apparent satisfaction. The gum is made of certain parts of gum-arabic, gum-tragacanth, a small quantity of resin and fat. The fat used is not lard (that being too expensive), but it is a substance expressed from the bodies of hogs, cats, dogs, and other animals found dead in the streets of cities. Nice, isn't it? —Selected.

WINNING HIS PLUMES.

A CIVILIZED young gentleman considers the time when he first adopts the coat and hat of manhood, an important one. As far as outside appearance goes, it shows that he, at least, thinks he is no longer a boy, and he expects to be treated as a young gentleman. The young Indian is not particularly troubled about hat and pantaloons, yet he has his peculiar way of showing his claim to be considered a young warrior—which, among the Indians, is the same as young gentleman. So, instead of going to the tailor or hatter for the emblems to show that he has left the state of boyhood, he puts on eagles' feathers. You think that it would be an easy enough matter for the young Indian to shoot an eagle and secure the feathers. So it would be, but that is not the way it is done. Feathers obtained in this way will not pass muster. Custom requires that the young savage shall, if he would claim a place among the "big Injuns," pluck his feathers from a living bird—in fact, win his plumes in a personal struggle with their rightful owner—the eagle. The Indian is allowed no advantage over the bird, but each must fight with the weapons nature gave them. As the eagle has great strength, sharp claws, and a formidable bill, it will be seen that the young Indian has no slight task before him. The first point is to get at the eagle; to do this, the savage finds a hollow place in the ground, or makes one, large enough to hold him. The top of the hole is covered with sticks, so that he is completely hidden. A rabbit is fastened upon the sticks which serves as a bait; when the eagle sees the rabbit, and comes swooping down after its prey, it is caught by the legs by the concealed Indian. Then comes the struggle. It is not easy to see how, with one hand required to hold the claws, and the other to defend himself from the beak, the young warrior is to get the much coveted plumes. We may think that feathers from a dead eagle would answer just as well; but the Indians look upon it differently, and hold that the younger who wishes to be considered a warrior, must first show his strength and courage. If a set-to with a full grown eagle will not test these, we do not know what will.

A MILITARY GOAT.—The non-commissioned officers of a Prussian field battery announce, by advertisement in a Berlin paper, the death of a comrade in war—a goat called "Herr Schneider." The favorite had been in the corps since 1864. He always marched with the men of the first gun, from whom he also received his rations. He attended parade, took his place among the non-commissioned officers, and appeared to listen attentively to the orders. When the war broke out in 1866, he marched at the head of the battery, and was promoted to the rank of sergeant by the privates, who presented him with a beautiful collar, on which were embroidered the marks of his military rank. When actual hostilities commenced he was tied to an ammunition wagon and kept in the rear, but during the battle of Keniginhoff, Herr Schneider managed to slip away, and went to the front at full gallop, an orderly following him as fast as he could. At that moment the crown prince met them. On being informed of the state of affairs, his royal highness appeared much amused, and said jocosely. "Let him go; he has orders to attack the enemy." Subsequently, Herr Schneider returned to his ammunition wagon, none the worse for his charge. After the battle the artillerymen promoted him to the brevet rank of sergeant-major for courage in the presence of the enemy. The goat marched at the head of his battery on the triumphant entry of the army into Berlin, in September, 1866.—*Selected.*

Selected Poetry.

THE IMPATIENT HEN.

This is the tale of a queer old hen
That sat on eggs exactly ten;
She made her nest with pride and care,
And weather foul and weather fair,
You always found her at her post,
For patience was her daily boast.
Alas! how oft it is our lot
To brag of what we haven't got—
This will apply to heus, and men,
And boys, and girls.

Days passed, and when
The sun began to warmer grow,
And grass and leaves began to show
Their twinkling green on hill and vale;
When sweet and pleasant was the gale,
This queer old hen began to long
To join once more the noisy throng
Of idle gossips—half a score—
That strutted by the old barn door.

"O, dear! O, dear! here I am tied!
A weary lot is mine," she sighed.
"No gleam of pleasure do I catch;
Why don't these tiresome chickens hatch?
It worries me in heart and legs;
To sit so long upon these eggs,
I'm sick of pining here at home;
O, chicks, chicks, chicks, why don't ye come?
Your little houses, white and warm,
I've sheltered from the angry storm."

"There's Mother Dominique, next door,
Her darlings number twenty-four,
And they've been out a week or more;
And now she wanders at her ease,
As proud and happy as you please.
So stir your pinky, little pegs,
My yellow bills, come out and walk,
Or else I'll doubt my eggs are eggs,
And think they are but lumps of chalk!

Then something rash and sad befell;
This old hen pecked each brittle shell,
And, not so wonderful to tell,
Her treatment, which was very rude,
Killed on the spot her tiny brood!
And now, despised by fowls and men,
She lives a broken-hearted hen!

This is the moral to my lay:
To reap success in work and play,
Why spoil whatever you've begun,
Thro' eagerness to have it done?
Remember poor Dame Partlet's fate;
Don't be impatient—learn to wait.

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